Application No.: 10/603,037

Office Action Dated: May 10, 2006 Advisory Action Dated: July 28, 2006 PATENT REPLY FILED UNDER EXPEDITED PROCEDURE PURSUANT TO 37 CFR § 1.116

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A method for improving data processing in connection with a database, said method comprising:

defining a dimension comprising a plurality of attributes;

assigning each attribute to a respective column of said database; and

defining relationships between said attributes, wherein said relationships are not subject to restrictions placed on said database and;

accessing said database via said dimension.

- 2. (Canceled)
- (Original) A method in accordance with claim 1, further comprising:
 defining at least one hierarchy comprising a sequence of said attributes.
- 4. (Original) A method in accordance with claim 3, wherein each hierarchy defines a drill down path for accessing said database.
- 5. (Original) A method in accordance with claim 3, wherein a hierarchy contains one attribute.
- 6. (Original) A method in accordance with claim 3, wherein said act of defining said at least one hierarchy is independent of said database.

Application No.: 10/603,037

Office Action Dated: May 10, 2006 Advisory Action Dated: July 28, 2006

REPLY FILED UNDER EXPEDITED PROCEDURE PURSUANT TO

37 CFR § 1.116

PATENT

(Canceled)

8. (Original) A method in accordance with claim 1, wherein said database is a relational

database.

7.

9. (Original) A method in accordance with claim 1, wherein said dimension is utilized

with an on line analysis processing (OLAP) system.

10. (Original) An application programming interface (API) comprising means for

performing the method of claim 1.

11. (Currently Amended) A computer-readable storage medium having computer-

executable instructions for improving data processing in connection with a database by

performing acts comprising:

defining a dimension comprising a plurality of attributes;

assigning each attribute to a respective column of said database; and

defining relationships between said attributes, wherein said relationships are not

subject to restrictions placed on said database and;

accessing said database via said dimension.

12. (Canceled)

Application No.: 10/603,037

Office Action Dated: May 10, 2006

Advisory Action Dated: July 28, 2006

PATENT REPLY FILED UNDER EXPEDITED PROCEDURE PURSUANT TO

37 CFR § 1.116

13. (Original) A computer-readable medium in accordance with claim 11, further having

computer-executable instructions for defining at least one hierarchy comprising a sequence of

attributes.

14. (Original) A computer-readable medium in accordance with claim 13, wherein each

hierarchy defines a drill down path for accessing said database.

15. (Original) A computer-readable medium in accordance with claim 13, wherein a

hierarchy contains one attribute.

16. (Original) A computer-readable medium in accordance with claim 13, wherein said

act of defining said at least one hierarchy is independent of said database.

17. (Canceled)

18. (Original) A computer-readable medium in accordance with claim 11, wherein said

database is a relational database.

19. (Original) A computer-readable medium in accordance with claim 11, wherein said

dimension is utilized with an on line analysis processing (OLAP) system.

20. (Previously Presented) A system for accessing a database, said system comprising:

Application No.: 10/603,037

Office Action Dated: May 10, 2006 Advisory Action Dated: July 28, 2006 PROCEDURE PURSUANT TO

37 CFR § 1.116

PATENT

a processor coupled to a storage device, said storage device comprising said database;

a first definition component for defining a dimension comprising a plurality of

attributes;

an assignment component for assigning each attribute to a respective column of said

database;

a second definition component for defining relationships between said attributes,

wherein said relationships are not subject to restrictions placed on said database; and

an access component for allowing access to said database via said dimension.

21. (Original) A system in accordance with claim 20, further comprising:

a third definition component for defining at least one hierarchy within each

dimension, each hierarchy comprising a sequence of attributes.

22. (Original) A system in accordance with claim 21, wherein each hierarchy defines a

drill down path for said access component.

23. (Original) A system in accordance with claim 21, wherein a hierarchy contains one

attribute.

24. (Original) A system in accordance with claim 21, wherein said third definition

component defines said at least one hierarchy independent of said database.

25. (Canceled)

Page 5 of 15

Application No.: 10/603,037

Office Action Dated: May 10, 2006 Advisory Action Dated: July 28, 2006

DOCKET NO.: MSFT-1587/302202.1

PATENT REPLY FILED UNDER EXPEDITED PROCEDURE PURSUANT TO 37 CFR § 1.116

26. (Original) A system in accordance with claim 20, wherein said system is utilized with

an on line analysis processing (OLAP) system.

27. (Previously Presented) A system for accessing a database, said system comprising:

means for defining a dimension comprising a plurality of attributes;

means for assigning each attribute to a respective column of said database;

means for defining relationships between said attributes, wherein said relationships

are not subject to restrictions placed on said database;

means for accessing said database via said dimension; and

means for defining at least one hierarchy comprising a sequence of said attributes.

28. (Canceled)

29. (Original) A system in accordance with claim 27, wherein said at least one hierarchy

is defined independent of said database.

30. (Original) A system in accordance with claim 27, wherein said system is an on line

analysis processing (OLAP) system.

31. (Original) A system in accordance with claim 27, wherein said means for defining a

dimension, means for assigning, means for defining relationships, means for accessing and

Application No.: 10/603,037

Office Action Dated: May 10, 2006 Advisory Action Dated: July 28, 2006 PATENT REPLY FILED UNDER EXPEDITED PROCEDURE PURSUANT TO 37 CFR § 1.116

means for defining at least one hierarchy comprise at least one application programming interface (API).

32. (Currently Amended) A <u>computer-readable storage medium in accordance with claim 11 comprising a</u> data structure embodied by at least one computer readable medium, comprising:

the a dimension comprising the a plurality of attributes, wherein each attribute is bound to a column in a database; and

a logical structure indicative of relationships between said plurality of attributes, wherein said relationships are not subject to restrictions placed on said database.

- 33. (Original) A data structure in accordance with claim 32, said data structure further comprising at least one hierarchy comprising a sequence of attributes.
- 34. (Original) A data structure in accordance with claim 33, wherein each hierarchy provides a drill down path for accessing said database.
- 35. (Original) A data structure in accordance with claim 33, wherein a hierarchy contains a single attribute.
- 36. (Original) A data structure in accordance with claim 33, wherein each sequence is defined independent of restrictions associated with said database.

Application No.: 10/603,037

Office Action Dated: May 10, 2006

Advisory Action Dated: July 28, 2006

PATENT REPLY FILED UNDER EXPEDITED PROCEDURE PURSUANT TO

37 CFR § 1.116

37. (Original) A data structure in accordance with claim 32, wherein said logical structure

is defined independent of restrictions associated with said database.

38. (Original) A data structure in accordance with claim 32, wherein said database is a

relational database.

39. (Original) A data structure in accordance with claim 32, wherein said database is

capable of being utilized with an online analytical processing (OLAP) system.

40. (Previously Presented) A method for retrieving data from a database, said method

comprising:

receiving a data retrieval request including a dimension, wherein:

said dimension includes a plurality of attributes;

each attribute is assigned to a respective column of said database; and

relationships between said attributes are defined, wherein said relationships

are not subject to restrictions placed on said database; and

retrieving said data from said database via said dimension.

41. (Original) A method in accordance with claim 40, further comprising:

providing said retrieved data in response to said data retrieval request.

Application No.: 10/603,037

Office Action Dated: May 10, 2006 Advisory Action Dated: July 28, 2006 PATENT REPLY FILED UNDER EXPEDITED PROCEDURE PURSUANT TO 37 CFR § 1.116

42. (Original) A method in accordance with claim 40, said data retrieval request further

including at least hierarchy comprising a sequence of said attributes.

43. (Original) A method in accordance with claim 42, wherein each hierarchy provides a

drill down path for accessing said database.

44. (Original) A method in accordance with claim 42, wherein a hierarchy contains a

single attribute.

45. (Original) A method in accordance with claim 42, wherein each sequence is defined

independent of restrictions associated with said database.

46. (Original) A method in accordance with claim 40, wherein said relationships between

said attributes are defined independent of restrictions associated with said database.

47. (Original) A method in accordance with claim 40, wherein said database is a

relational database.

48. (Original) A method in accordance with claim 40, wherein said database is capable of

being utilized with an online analytical processing (OLAP) system.